



Attorney Docket No. 2300-19545 (PP19545.003)

PATENT

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By: [Signature]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of HOUGHTON

Serial No.: 10/612,884

Examiner: Unassigned

Confirmation No.:

Art Unit: Unassigned

Filed: July 2, 2003

For: HCV FUSION PROTEINS WITH MODIFIED NS3 DOMAINS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §1.97(b)**

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- ☒ Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08 is enclosed.
- ☐ No copies of the publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. \_\_\_\_ to which the above-identified application claims priority under 35 U.S.C. §120.
- ☐ Publication(s) \_\_\_\_ listed on the attached Form PTO/SB/08A were cited in a foreign search or examination report corresponding to \_\_\_\_ application serial no. \_\_\_\_ and mailed on \_\_\_\_.
- ☐ Enclosed is a copy of a non-English publication(s) \_\_\_\_\_. Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).
- ☐ Enclosed is a copy of a non-English publication(s) \_\_\_\_\_. English language publication \_\_\_\_ (copy enclosed) claims priority from this non-English publication.

- ☐ Enclosed is an explanation of non-English publication(s) \_\_\_ for which an English translation is not available.
- ☐ Enclosed is an English translation of non-English publication(s) \_\_\_ cited in the attached Form PTO/SB/08A.
- ☐ Enclosed is a copy of pending patent Application Serial No. \_\_\_.

This Information Disclosure Statement is filed within any one of the following time periods:

- ☐ within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);
- ☐ within three months from the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in this international application;
- ☒ before the mailing date of a first office action on the merits; or
- ☐ before the mailing of a first office action after the filing of a request for continued examination under 37 C.F.R. §1.114.

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Please direct all further written communications in this application to:

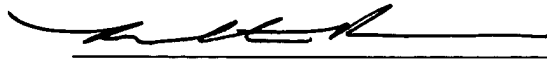
Alisa A. Harbin  
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Dated: 10/20/03

Respectfully submitted,

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Roberta L. Robins  
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Attorney Docket No. 2300-19545 (PP19545.003)

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By: Yang Tang  
Yang Tang

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**INFORMATION DISCLOSURE STATEMENT TRANSMITTAL**

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

- ☒ In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
- ☐ In accordance with 37 C.F.R. §1.97(c), also enclosed is:
  - ☐ the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or
  - ☐ a statement as specified in 37 C.F.R. §1.97(e).
- ☐ In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. § 1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
- ☐ Check No. \_\_\_ in the amount of \$\_\_\_ for the total fee is attached.

☒ [X] A return receipt postcard is also enclosed.

☐ [] Please charge \$\_\_\_\_\_ to Deposit Account No. 18-1648 for the total fee.  
This paper is being submitted in duplicate.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 18-1648.

Please direct all further written communications in this application to:


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Reg. No. 33,208





Please type a plus sign (+) inside this box →

+

PTO/SB/08A (08-00)

<b>Substitute for form 1449B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/612,884
				Filing Date	July 2, 2003
				First Named Inventor	HOUGHTON
				Group Art Unit	Unassigned
Examiner Name	Unassigned				
Sheet	2	of	3	Attorney Docket Number	2300-19545 (PP19545.003)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C1	BARTENSCHLAGER et al., "Nonstructural protein 3 of the hepatitis C virus encodes a serine-type proteinase required for cleavage at the NS3/4 and NS4/5 junctions," J. Virology 67:3835-3844, 1993		
	C2	BOTARELLI et al., "T-lymphocyte response to hepatitis C virus in different clinical courses of infection," <i>Gastroenterology</i> 104:580-587, 1993		
	C3	CHEN et al., "Human and murine antibody recognition is focused on the ATPase/Helicase, but not the protease domain of the hepatitis C virus nonstructural 3 protein," <i>Hepatology</i> 28:219-224, 1998		
	C4	COOPER et al., "Analysis of a successful immune response against hepatitis C virus," <i>Immunity</i> 10:439-449, 1999		
	C5	DIEPOLDER et al., "Possible mechanism involving T-lymphocyte response to non-structural protein 3 in viral clearance in acute hepatitis C virus infection," <i>Lancet</i> 346:1006-1007, 1995		
	C6	DIEPOLDER et al., "Immunodominant CD4 T-cell epitope within nonstructural protein 3 in acute hepatitis C virus infection," <i>J. Virology</i> 71:6011-6019, 1997		
	C7	FERRARI et al., "T-cell response to structural and nonstructural hepatitis C virus antigens in persistent and self-limited hepatitis C virus infections," <i>Hepatology</i> 19:286-295, 1994		
	C8	HOFFMAN et al., "Mapping of immunodominant CD4 T lymphocyte epitopes of hepatitis C virus antigens and their relevance during the course of chronic infection," <i>Hepatology</i> 21:632-638, 1995		
	C9	IWATA et al., "Interferon gamma production by peripheral blood lymphocytes to hepatitis C virus core protein in chronic hepatitis C infection," <i>Hepatology</i> 22:1057-1064, 1995		
	C10	MINUTELLO et al., "Compartmentalization of T lymphocytes to the site of disease: intrahepatic CD4 T cells specific for the protein NS4 of hepatitis C virus in patients with chronic hepatitis C," <i>J. Exp. Med.</i> 178:17-25, 1993		
	C11	MISSALE et al., "Different clinical behaviors of acute hepatitis C virus infection are associated with different vigor of the anti-viral cell-mediated immune response," <i>J. Clin. Invest.</i> 98:706-714, 1996		

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number.

<sup>2</sup> Applicant is to place a check mark here if English language Translation attached.

